WHAT IS CLAIMED IS:

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1. A flux shunt for use in a power generator comprising a stator having a stator core, wherein the flux shunt shunt attracts fringing magnetic flux in a power generator and wherein a permeability of the flux shunt is greater than a permeability of the stator core.

2. The flux shunt of claim 1, wherein the flux shunt comprises a magnetically isotropic material.

3. The flux shunt of claim 1, wherein the flux shunt is substantially cylindrically-shaped.

4. The flux shunt of claim 1, wherein the flux shunt comprises multiple discrete rings capable of being disposed around the periphery of an inner surface of the stator.

5. The flux shunt of claim 1, wherein the flux shunt comprises a plurality of segments capable of being discretely disposed around the periphery of an inner surface of the stator.

6. A power generator stator assembly comprising:

a substantially cylindrical stator core comprising an inner surface, an outer surface, and two ends; and

a flux shunt disposed adjacent to the inner surface of the stator core at one end of the two ends of the stator core, wherein a permeability of the flux shunt is greater than a permeability of the stator core.

7. The power generator stator assembly of claim 6, wherein the flux shunt comprises a first flux shunt disposed at a first end of the two ends, wherein the power generator stator assembly further comprises a second flux shunt disposed adjacent to the inner surface of the stator core at a second end of the two ends of the stator core, and wherein a permeability of each of the first flux shunt and the second flux shunt is greater than a permeability of the stator core.

8. The power generator stator assembly of claim 6, wherein the flux shunt comprises an approximately cylidrically-shaped insert that is disposed adjacent to the inner surface of the proximal end.

9. The power generator stator assembly of claim 8, wherein an interior surface of the stator core includes multiple steps stepping the stator core away from a rotor disposed inside of the stator core, and wherein the flux shunt futher comprises an outer surface that mates with the multiple steps of the stator core.

10. The power generator stator assembly of claim 6, wherein the flux shunt comprises a plurality of approximately ring-shaped inserts.

11. The power generator stator assembly of claim 6, wherein the flux shunt comprises a magnetically isotropic material.

12. The power generator stator assembly of claim 6, wherein the flux shunt comprises an inner surface and an outer surface, wherein the outer surface of the flux shunt is disposed adjacent to the inner surface of the stator core, and wherein the power generator stator assembly further comprises a flux shunt retainer that is disposed adjacent to the inner surface of the flux shunt.

13. A power generator comprising:

an approximately cylindrically-shaped stator comprising a stator core, an inner surface, and two ends;

a flux shunt circumferentially disposed adjacent to the inner surface of the stator at approximately an end of the two ends of the stator;

a rotor rotatably disposed inside of the stator; and

wherein a rotation of the rotor produces a fringing magnetic flux that axially impinges upon the end of the stator, and wherein the flux shunt causes the magnetic flux axially impinging upon the end of the stator to be less than a magnetic flux that would axially impinge upon the end of the stator in the absence of the flux shunt.

14. The power generator of claim 13, wherein a permeability of the flux shunt is greater than a permeability of the stator core.

15. The power generator of claim 13, wherein the flux shunt comprises a first flux shunt disposed at approximately a first end of the two ends of the stator, wherein the power generator further comprises a second flux shunt circumferentially disposed adjacent to the inner surface of the stator at approximately a second end of the two ends of the stator, and wherein each of the first flux shunt and the second flux shunt causes flux axially impinging upon the respective first and second ends of the stator be less than a flux that would axially impinge upon the respective first and second ends in the absence of the flux shunts.

16. The power generator of claim 13, wherein the flux shunt comprises an inner surface and an outer surface, wherein the outer surface of the flux shunt is disposed adjacent to the inner surface of the stator core, and wherein the power generator further comprises a flux shunt retainer that is disposed adjacent to the inner surface of the flux shunt and that retains the flux shunt in position relative to the stator.

17. The power generator of claim 13, further comprising a flange disposed adjacent to the end of the stator, wherein the rotation of the rotor produces a fringing magnetic flux that axially impinges upon the flange, and wherein the flux shunt causes

the magnetic flux axially impinging upon the flange to be less than a magnetic flux that would axially impinge upon the flange in the absence of the flux shunt.

18. The power generator of claim 13, further comprising a plurality of axially oriented keybars circumferentially disposed adjacent to an outer surface of the stator, wherein the rotation of the rotor produces a fringing magnetic flux that axially impinges upon an end of each keybar of the plurality of keybars, and wherein the flux shunt causes the magnetic flux axially impinging upon the ends of the keybars to be less than a magnetic flux that would axially impinge upon the ends of the keybars in the absence of the flux shunt.

19. A power generator comprising:

an approximately cylindrically-shaped stator comprising a stator core, an inner surface, an outer surface, a proximal end, and a distal end;

a flux shunt circumferentially disposed adjacent to the inner surface of the stator at approximately the proximal end of the stator;

a rotor rotatably disposed inside of the stator;

a plurality of axially oriented keybars circumferentially disposed adjacent to the outer surface of the stator; and

wherein a rotation of the rotor produces a first keybar voltage in a first keybar of the plurality of keybars and a second keybar voltage in a second keybar of the plurality of keybars and wherein a voltage differential between the first keybar voltage and the second keybar voltage is less than a voltage differential that would exist between the first and second keybar voltages in the absence of the flux shunt.

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20. A power generator comprising:

an approximately cylindrically-shaped stator comprising a stator core, an inner surface, an outer surface, and two ends;

a flux shunt circumferentially disposed adjacent to the inner surface of the stator at approximately an end of the two ends of the stator;

a rotor rotatably disposed inside of the stator

wherein a rotation of the rotor causes an induction of a magnetic flux that is greater than the magnetic flux that would be induced in the absence of the flux shunt.

21. In a power generator that comprises an approximately cylindrical stator having an inner surface, an outer surface, two ends, and a stator core, and further comprising a rotor rotatably disposed inside of the stator, a method for controlling flux in the stator comprising steps of:

inserting a flux shunt adjacent to the inner surface of the stator at approximately an end of the two ends the stator;

rotating the rotor;

inducing a fringing flux that impinges upon the end of the stator in response to the rotation of the rotor; and

wherein the fringing flux that impinges upon the end of the stator is less than a fringing flux that would impinge upon the end of the stator in the absence of the inserted flux shunt.

22. A method for reducing a keybar voltage of a power generator comprising an approximately cylindrical stator having an inner surface, an outer surface, a stator core, and two ends, and further comprising a plurality of keybars axially disposed adjacent to the outer surface of the stator and a rotor rotatably disposed inside of the stator, the method comprising steps of:

inserting a flux shunt adjacent to the inner surface of the stator at approximately one of the two ends of the stator;

rotating the rotor;

inducing a first keybar voltage in a first keybar of the plurality of keybars;

inducing a second keybar voltage in a second keybar of the plurality of keybars;

producing a voltage differential between the first keybar voltage and the second keybar voltage; and

wherein the voltage differential is less than a voltage differential that would be produced between the first and second keybar voltages by a rotation of the rotor in the absence of the flux shunt.

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